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Mammalian type material from Cameroon in the Museum für Naturkunde Berlin

Paul Taku Bisong[1], Jason Dunlop[1], Catarina Madruga[2]

1 *Museum für Naturkunde, Leibniz Institute for Evolution and Biodiversity Science, Invalidenstraße 43, 10115 Berlin, Germany*

2 *German Foundation for Lost Art (DZK), and Centre for Humanities of Nature, Museum für Naturkunde, Leibniz Institute for Evolution and Biodiversity Science, Invalidenstraße 43, 10115 Berlin, Germany*

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Corresponding author: Paul Taku Bisong (pbisong@hotmail.com)

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Abstract

Historical data, combined with current data on species distribution, are a valuable resource for tracking changes in biodiversity and can potentially be applied to developing models in conservation biology and designing and assessing conservation strategies. Historical data supporting current knowledge on the natural history of the African continent are primarily held in Western museums. The Zoologisches Museum Berlin (ZMB), which is today part of the Museum für Naturkunde Berlin (MfN), is the primary source of reference for zoological collections from former German colonial territories including Cameroon. Here, we document for the first time a catalogue of the type material in the mammal collection of the MfN from the point of view of a geographical region. The type collection includes 91 type specimens identified in the catalogues as originating from German 'Kamerun' and which correspond to 31 described species, of which 12 are currently accepted (valid) species names. Of the 31 described species, 21 are represented by holotypes, three para-holotype series, one para-lectotype series and six syntype series. We hope that this first analysis of zoological objects, based on geographical location, will lead to similar research on other geographical locations of collection. This could provide more information on the provenance of collections and on colonial collecting practices, as well as contribute to the accessibility of collections in Western museums.

Key Words

Africa, colonial collecting, historical collections, Mammalia, type material, specimen, Zoologisches Museum Berlin

Introduction

Zoological collections have been described as the main archive of animal biodiversity on Earth (Bogutskaya et al. 2022) and constitute a long-standing physical record of past species occurrences (Boakes et al. 2010; Johnson et al. 2011; Holmes et al. 2016). They represent a much more extensive record than ecological long-term surveys which only became established in the 1980s. Researchers have emphasised the role of natural history collections as a resource for detecting long-term changes in geographic range, phenology, abundance and species' evolution (Boakes et al. 2010). Furthermore, it is predicted that zoological collections could enable a better understanding of current condition of biomes and contribute to the development of better strategies for the management of biological resources (Ade et al 2001; Suarez and Tsutsui 2004). Type specimens are the original and unique representatives of a taxon and are the most important part of a zoological collection (Bogutskaya et al. 2022). Their descriptions have been published and would ideally contain information on the collector of the specimen, the locality of collection, the date of collection, the author of the description and the characteristics attributed to the specimen by the author. Hence, they represent physical vouchers that retain the diagnostic characters underlying the description of a new taxon. In addition to being the reference for a sci-

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entific name, they also serve as a scientific memory for later research (Acharya and Subedi 2005).

Historical data supporting current knowledge of the natural history of the African continent are primarily held in Western museums and similar collections (Ashby and Machin 2021). Between 1891 and 1920, Berlin held a mandate as a clearing house for all zoological, paleontological, botanical and ethnographic collections obtained on German official expeditions in colonial territories (Kaiser 2021). The Museum für Naturkunde Berlin (MfN), part of which was formerly known as the Zoologisches Museum Berlin and whose zoological collections are abbreviated as 'ZMB', is thus the primary source of reference for all colonial zoological collections in Germany from former German colonial territories including German 'Kamerun'.

Cameroon continues to seek ways to improve conservation policies and the sustainable use of biological resources. Historical data, combined with current data on species distributions, are a valuable resource for tracking changes in biodiversity and can potentially be applied to developing models in conservation biology, designing and assessing conservation initiatives and tracking progress in conserving overall biodiversity (Boakes et al. 2010). Hence, information on collections and research on species' distribution and biodiversity loss in Cameroon could contribute to the establishment of better conservation policies, especially when applied to specific localities. In 2015, Cameroon's Ministry of Agriculture and Rural Development (MINADER) requested that research organisations on Cameroon's biome make their research findings available to policy-makers in the country for consideration of legislative procedures on its biodiversity (MINADER 2015). Therefore, there is a strong incentive to make the Berlin Museum's data on Cameroon collections available to both the country's government and to Cameroonian researchers or other interested parties who cannot access the Museum directly. This paper, therefore, offers an initial study exploring the potential of data repatriation to Cameroon.

Here, we focus on documenting type material in the MfN's mammal collection which are considered in the catalogues as originating from German 'Kamerun', which includes the contemporary territory of Cameroon and parts of today's Central African Republic and Nigeria. By accessing a range of source materials on specimens, including their original tags, skull inscriptions, scientific publications, historical catalogues and archival shipment lists, we present for the first time a complete inventory of the type specimens from 'Kamerun' in the mammal collection, including the implicated suppliers, collection dates and type localities (incompletely documented). Unfortunately, the available information in the catalogues and historical sources consulted do not allow for more precise details on habitat, elevation and actual geographical coordinates, which would have been desirable. However, the results of this study may be valuable to several stakeholders, including conservation biologists, taxonomists, ecologists and historians, as well as the Cameroonian Government and collection managers. The data presented here may be improved and expanded in the future, to include more detailed information and, therefore, contribute to extrapolating species distributions from the particular historical time period, in the specific localities in West Africa. This study also aims to provide a starting point for the discussion of digital and physical access to the collections, as well as considerations on data repatriation from German museums to former colonial regions where they could be of more relevance. This was the first step of a collaborative project on the identification of shipments of natural history specimens from the territories of 'Kamerun' during the period of German occupation.

Methods

Ninety-one specimens with potential type status from 'Kamerun' registered in the digital database ("Specify") of the mammal collections of the Museum für Naturkunde Berlin were assessed, including those whose type status required clarification. The specimens included dry preparations of skins, skulls and skeletal parts, as well as wet collections in 70% ethanol. Specimen reference numbers are in the format ZMB_Mam_XXXXX, where "ZMB" is the universally accepted abbreviation for the Zoologisches Museum Berlin and "Mam" is the shorthand for the mammal collection. The number refers to the five-digit general catalogue number of the specimen. For each specimen, we also assessed, when available, the shipment number and shipment entry in the accession catalogue (the "A-catalogue" number). Where necessary, we employed Article 73.2.3 of the International Code of Zoological Nomenclature (ICZN, 4th Edition 1999), which places the collection locality of the holotype or lectotype as the collection locality of the species or sub-species over those of the paratypes or paralectotypes. In other words, for a type series with specimens from different collection localities, the collection locality of the designated holotype or lectotype becomes the *locus typicus* of the species. We also included the conservation status of each species drawing on the Red List of threatened species from the International Union for Conservation of Nature (IUCN). The annotated list of type specimens collected from Cameroon in the Mammal Department of the Museum (see Results) is arranged in alphabetical order. Nomenclature follows the Integrated Taxonomic Information System (ITIS) with respect to valid names and synonyms. Photographs of the relevant type material are being made as part of the wider digitisation projects at the MfN and will subsequently be available online through the museum portal. These will also contribute to further planned detailed studies (Taku Bisong, in prep.) addressing specific aspects of the Cameroon holdings in this collection.

Results

The type collection in Berlin includes 31 described and named species, of which 12 are currently accepted (valid and available) species names described in the databank as "from Cameroon." Of the 31 described species, 21 are represented by holotypes, three para-holotype series, one para-lectotype series and six syntype series. Most of the type species (21) were described by Paul Matschie (1861–1926), curator of the Mammal Department in Berlin in the period from 1895–1926, i.e. during the main phase of colonial activity and collection expansion. The type specimens were collected by at least 21 collectors from one or more of 26 collecting localities in Cameroon. Approximately a quarter of the specimens were supplied by a single individual, Georg Zenker (1855–1922), who shipped collections from Bipindi and the military station in Yaoundé in the period 1889–1922. If any of the relevant information for a specimen is unavailable, the field for the information is not included.

Order Artiodactyla Owen, 1848
Family Bovidae Gray, 1821

Adenota pousarguesi **Neumann, 1905**

MfN specimen. Skull. ZMB_Mam_86187.

Author of name and type description. Oscar Rudolph Neumann (1905).

Present name. *Kobus kob* (Erxleben, 1777).

Dedication of name (patronym). Eugène de Pousarges (1859–1901).

Specimen information in general catalogue. • "♂*, *Adenota pousarguesi*, Sch, A1[a].03, Semikore, Sanaga-Fluss, W-Kamerun, Sheunemann 8.X.1902, O. Neumann" Vol. 9, p. 256.

Shipment information (A-catalogue number). Listed in specify as A 19.03. but A-catalogue Information does not match this specimen. Most probably refers to shipment in A-catalogue under reference A 11.03: "Sammlung, Yaunde, Kamerun, Ober Lt. Scheunemann".

Collecting information in description • "Typus von *Adenota pousarguesi*. Schädel eines alten Bockes von Lt. Scheunemann am oberen Sanaga in Süd-Kamerun (Berl. Mus.) erlegt [Type for *Adenota pousarguesi*. Skull of an old male, shot by Lieutenant Scheunemann in the Upper Sanaga [river] in South Cameroon]" (Neumann 1905: 92).

Specifics of specimen in the description. Male specimen

Information on the specimen. Specimen not available for consultation as of 16.09.2022.

Collecting locality. • "Semikore, Sanaga-Fluss, W-Kamerun [At the time of German presence in 'Kamerun', 'Semikore' was the Chief of the Yesum people, a clan of the Ewondo (Yaounde) tribe close to the Sanaga River (Wirz 1972)]".

Collected by. Peter Scheunemann (1870–1937).

Type status based on description. Holotype (single specimen).

IUCN conservation status. Least Concern.

Remarks. Corresponding shipment is mentioned in MfN archive folder MfN, HBSB, ZM S III Scheunemann Hauptmann. According to Neumann, a female of this species, shipped from Cameroon, lived in the Berlin Zoological Garden for several years. Information on the collecting date was missing from all sources assessed.

Order Carnivora Bowdich, 1821
Family Canidae Fischer de Waldheim, 1817

Canis (Cynalopex) pallidus oertzeni **Matschie, 1910**

MfN specimens. Round skins. ZMB_Mam_39927; ZMB_Mam_39929; ZMB_Mam_39930; ZMB_Mam_39931. Skulls. ZMB_Mam_65796; ZMB_Mam_65797.

Author of name and type description. Paul Matschie (1910).

Present name. *Vulpes pallida oertzeni* Matschie, 1910.

Dedication of name (patronym). Jasper Martin Otto von Oertzen (1880–1948).

Specimen information in the general catalogue. All round skins • "B, Dikoa, Hinterland von Kamerun, 26.III.10, Umlauff, A 165/10" Vol. 4, p. 411. All skulls • "Schädel, Dikoa, Hinterland von Kamerun, 26.III.1910 Umlauff, IX.09 Oertzen, A165/10" Vol. 7, p. 239.

Shipment information (A-catalogue number). A 165.10 • "[9 items], Dikoa, Hinterland von Kamerun, 26.III.10, von Oertzen und Umlauff [Dikoa, Cameroon hinterland, 26.III.10, from Oertzen and Umlauff]".

Collecting information in description. • "1 ♂, 3 ♀ Felle, von denen 1 ♂ und 1 ♀ mit Schädeln versehen sind. Dikoa, Nordost-Kamerun. September 1909. Von Herrn Oberleutnant von Oertzen gesammelt und dem Berliner Zoologischen Museum geschenkt [1 ♂, 3 ♀ skins, from which 1 ♂ and 1 ♀ came with skulls. Dikoa, Northeast Cameroon. September 1909. Collected by Mr. Oberleutnant von Oertzen and offered by the Berlin Zoological Garden]" (Matschie 1910: 370).

Specifics of specimen in the description. Single male specimen (skin and skull) preserved with indication "A. 165,10,1" and designated as the holotype.

Information on specimen. All specimens available

Collecting locality • "Dikoa [which was part of northern German 'Kamerun', today part of northern Nigeria with current English transcription as 'Dikwa']".

Collected by. Jasper Martin Otto von Oertzen (1880–1948), via the trading company Umlauff, based in Hamburg.

Collecting date. September 1909

Type status based on description. Para-holotype. Based on the sequence of this assessment, the male skull (Holotype) is probably ZMB_Mam_65796 as skull parameters measured were approximate with that in the description. Skull ZMB_Mam_65797 is a paratype. Male skin (Holotype) could not be identified as the skin parameters measured did not correspond to those in the description.

IUCN conservation status. Least Concern.

Remarks. Skin measurement differences are probably a consequence of fixing or long-term preservation. Collecting locality was part of "German Kamerun" and was registered in the databank as Cameroon, but is part of today's northern Nigeria.

Family Hyaenidae Gray, 1821

***Hyaena (Crocotta) noltei* Matschie, 1900**

MfN specimen. Skull. ZMB_Mam_82552.

Author of name and type description. Paul Matschie (1900b).

Present name. *Crocuta crocuta* Erxleben, 1777.

Dedication of name (patronym). Hermann Nolte (1869–1902).

Specimen information in general catalogue. • "**Hyaena (Crocotta) noltei* Schädel Yoko, oberer Sanaga, S-Kamerun/WA Nolte Sept.1899" Vol. 9, p. 109.

Shipment information (A-catalogue number). A 17.00 • "[1 item], Schädel von Hyaena, Yoko Kamerun, 28.VII.00, Nolte".

Collecting information in description. • "Herr Oberleutnant in der Kaiserlichen Schutztruppe für Kamerun, Nolte, hat im September 1899 auf der Station Yoko im Gebiete des oberen Sanaga, Süd Kamerun, eine gefleckte Hyaene erlegt, deren Schädel er dem Berliner Museum für Naturkunde freundlichst überlassen hat [Mr Nolte, Oberleutnant for the Imperial Schutztruppen [Protection Forces] in Cameroon, hunted a spotted Hyena in September 1899 in the Yoko Station in the district of the Upper Sanaga, South Cameroon, and kindly donated its skull to the Berlin Museum für Naturkunde]" (Matschie 1900b: 211).

Specifics of specimen in the description. The tail tassel of the specimen is incomplete therefore its full length could not be determined for comparison.

Information on the specimen. Specimen available.

Collecting locality. Yoko, by the Sanaga River, Cameroon.

Collected by. Hermann Nolte (1869–1902).

Collecting date. September 1899.

Type status based on description. Holotype (single specimen).

IUCN conservation status. Least Concern.

Remarks. A skin was also described by Matschie. He included an image of it in the description but did not mention whether the skin remained a property of the museum; the skin could not be traced at the time of publication.

Family Mustelidae G. Fischer, 1817

***Aonyx capensis microdon* Pohle, 1920**

MfN specimens. Skin. ZMB_Mam_30703. Skull. ZMB_Mam_30704.

Author of name and type description. Hermann Pohle (1919).

Present name. *Aonyx capensis* Schinz, 1821.

Specimen information in general catalogue. Skin • "*Aonyx microdon* Pohle* Fell, A.110.14, Nana Fluß bei Bomse Dr. Elbert 10.II.14, 388" Vol. 4, p. 31. Skull • "*Aonyx microdon* Pohle*, Schädel, A.110.14, Nana Fluß bei Bomse, Dr. Elbert, 10.II.14, 388" Vol. 4, p. 31.

Shipment information (A-catalogue number). A 110.14 • "[67 items], Kamerun Exped. des Reichs-Kolonialamt, 1.VII.14, Dr. Elbert [Cameroon Expedition of the Imperial Colonial Office, 1.VII.14, Dr. Elbert]".

Collecting information in description. • "Nana-Fluß, bei Dorf Bomse, Kamerun [River Nana, near the village Bomse, Cameroon]" (Pohle 1919: 145).

Information on specimen. All specimens available

Collecting Locality. Nana River, near Samba village in today's Central African Republic.

Collected by. Johannes Elbert (1878–1915).

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Near Threatened.

Remarks. Mandible detached from the skull. A shipment label included with the skin. Collecting locality registered in the catalogue as "Cameroon", but is part of today's Central African Republic.

Order Chiroptera Blumenbach, 1779
Family Pteropodidae Gray, 1821

***Scotonycteris ophiodon* Pohle, 1943**

MfN specimens. Skull; Skin in Alcohol. ZMB_Mam_50001.

Author of name and type description. Hermann Pohle (1943).

Present name. *Casinycteris ophiodon* (Pohle, 1943).

Specimen information in general catalogue. • "♀ ad., *Scotonycteris ophiodon* Pohle *, 105/1/14/22., Alk? Sch(v), A. 00, Bipindi, Bez. Kribi, Kamerun, 05.1899, G. Zenker S.V, 327" Vol. 6, p. 1.

Collecting information in description. • "Typus. Nr. 50051 des Berl. Mus.; ♀ juv.-ad. von Bipindi, Bez. Kribi, Kamerun, Mai 1899, Georg A. Zenker S. V. Die Zähne (auch die Eckzähne) sind voll in Stellung, die Basalnaht ist noch offen. Das Tier liegt in Alkohol; der leider auf der rechten Seite unter Verlust der Hirnkapselwand verletzte Schädel ist gereinigt [Type. N. 50051 of the Berlin Museum; ♀ juv.-ad. from Bipindi, district of Kribi, Cameroon, May 1899, Georg A. Zenker, Supplier. The teeth (including canines) are all in place, the base suture is still open. The animal is in alcohol; the skull, unfortunately injured on the right side with loss of the brain capsule wall, is cleaned] (Pohle 1943:78).

Specifics of specimen in the description. This specimen is stated to have been in alcohol for 44 years prior to the description, so the original colour of the specimen could not be determined at the time of description.

Information on specimen. All specimens available.

Collecting locality. Bipindi, Cameroon.

Collected by. George A. Zenker (1855–1922).

Collecting date. May, 1899.

Type status based on description. Holotype (single specimen).

IUCN Conservation status. Near Threatened.

Remarks. In the description, Pohle pays tribute to Zenker who died 12.2.1922 at Bipindihof. He acknowledges other contributions to the museum's type specimens including *Scotonycteris zenkeri* Mtsch., *Idiurus zenkeri* Mtsch., *Zenkerella insignis* Mtsch., and *Cercocebus albigena zenkeri* (page 87). The description cites this specimen as having collection number Nr. 50051 instead of 50001. Information on A-catalogue missing from sources accessed.

Scotonycteris zenkeri Matschie, 1894

MfN specimens. Skull; Skin in Alcohol. ZMB_Mam_66533.

Author of name and type description. Paul Matschie (1894).

Present name. *Scotonycteris zenkeri* Matschie, 1894

Specimen information in general catalogue. • "*Scotonycteris zenkeri**, ♀ ad, Sch Alk, Yaunde, Süd-Kamerun, Zenker, Lectotype" Vol. 7, p. 268.

Collecting information in description • "♀ ad. Yaunde Station. Zenker coli" (Matschie 1894:202).

Specifics of specimen in the description. • "Das einzige Exemplar, welches mir vorliegt, ist ein Weibchen mit starken Brustwarzen. Der Schädel ist dem von *Epomophorus* ähnlich [The only specimen I have is a female with 'developed' nipples. The skull is similar to that of *Epomophorus*]" (Matschie 1894:203).

Information on the specimen. All specimens available

Collecting locality. Yaounde, Cameroon.

Collected by. George August Zenker (1855–1922).

Type status based on description. Holotype (single specimen) [although labelled as a Lectotype].

IUCN conservation status. Near threatened.

Remarks. Information on the A-catalogue and collection date missing from all sources accessed.

Order Hyracoidea Huxley, 1869
Family Procaviidae Thomas, 1892

Procavia (Dendrohyrax) adametzi Brauer, 1912

MfN specimen. Skull, Round skin. ZMB_Mam_21062.

Author of name and type description. August Brauer (1912).

Present name. *Dendrohyrax dorsalis nigricans* Peters, 1879.

Dedication of name (patronym). Karl Wilhelm Adametz (1877–?).

Specimen information in general catalogue. • "*Male, *Dendrohyrax adametzi*. A.Br. Fell, A 4614, Barombi Station, Zeuner" Vol. 3, p. 47.

Shipment information (A-catalogue number). A 46.14 • "**Hyrax Dorsalis* tras., Kamerun, 2.10.88, 21062".

Collecting information in description. • "Diese Art, die das Zoologische Museum vom Barombi-See bei Johann-Albrechts-Höhe in Kamerun erhalten hat und die ich zu Ehren des um die Kenntnis der Fauna West-Kameruns sehr verdienten Herrn Oberleutnant Adametz benenne [This species, which the Zoological Museum received from Lake Barombi near Johann-Albrechts-Höhe in Cameroon and which I name in honour of Lieutenant Adametz, who was very deserving of the knowledge of the fauna of West Cameroon]" (Brauer 1912:412–413).

Specifics of specimen in the description. Largest skull length (gnathion condylion) 11.85, greatest among the *Procaviidae*.

Information on specimen. All specimens available.

Collecting locality. Barombi, Cameroon.

Collected by. Karl Ludwig Zeuner (1852–1890).

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Least concern.

Remarks. According to the description, there should be three specimens (2 skulls, 1 round skin). In the general catalogue, only 1 skull and 1 round skin from Barombi were mentioned. The whereabouts of the other skull is unknown.

Procavia (Dendrohyrax) adametzi zenkeri Brauer, 1914

MfN specimens. Skull; Skeleton; Skin. ZMB_Mam_21052; ZMB_Mam_21050; ZMB_Mam_21065; ZMB_Mam_21069. Skull. ZMB_Mam_21077.

Author of name and type description. August Brauer (1914).

Present name. *Dendrohyrax dorsalis nigricans* Peters, 1879.

Dedication of name (patronym). August Zenker (1855–1922).

Collecting information in description. Thirteen specimens mentioned in the description (6 skins and 7 skulls used) were collected from Bipindi, Edea, Namajong, Yaounde, Lolodorf, Alen -locality in E. Guinea and one skin of unknown locality. Collectors are Krücke, Conrad, Zenker and donations from 'Großh. Museum' in Karlsruhe - a Yaoundé skin specimen and from the 'Naturalienkabinett' in Stuttgart - the skin specimen of an unknown locality (Brauer 1914:38).

Specifics of specimen in the description. The dorsal patch is generally less conspicuous than in *D. adametzi*.

Information on specimen. All specimens available.

Type status based on description. Syntypes.

IUCN conservation status. Least Concern.

More specific collection and catalogue information for each specimen are summarised on Table 1.

Table 1. Specifics of individual *Pr. (Dendrohyrax) adametzi zenkeri* specimens.

MfN specimen (preparations)	Specimen information in General Catalogue	Shipment information (A-number)	Collecting locality	Collected by	Remarks
ZMB_Mam_21052 ZMB_Mam_21050 (Skull, Skeleton, Skin)	"*Dendrohyrax*, Fell, Shadel, A 54.13, Lolodorf, Kamerun, Conrad" Vol. 3, p. 47	(A 54.13) "[3 items] Lolodorf S. Kamerun, 22.V.13, Erich Conrad S"	Lolodorf, Cameroon	Leopold Conradt	Skin specimen for ZMB_Mam_21050 not available as of 08.09.2022.
ZMB_Mam_21065 (Skull, Skeleton, Skin)	"*Dendrohyrax adametzi zenkeri*. A.Br. Fell, Shadel, Skelett, A 384.11, 19km geradesüdl v. Edea, Kamerun, Wegemst. Behrens, Bez. Amtm. Krücke" Vol. 3, p. 48	(A 384.11) "[3 items] Edea, Kamerun, 30.03.1912, Bez. Amtm. Krücke."	Edea, Cameroon	Behrens	First skin label: *Dendrohyrax dorsalis* (Fraser, 1854). Second skin label: *Dendrohyrax d. nigricans*. However, skull label and skull inscription confirm specimen ZMB_Mam_21065 as *Dendrohyrax dorsalis nigricans*
ZMB_Mam_21069 (Skull, Skeleton, Skin)	"*Dendrohyrax*, Fell, Shadel, A 15.09, Bipindihof, Zenker" Vol. 3, p. 48	(A 15.09) "[3 items] Bipindi, 15.IV.08, Zenker"	Bipindi, Cameroon	George August Zenker	The skin specimen was not available as of 08.09.2022.
ZMB_Mam_21077 (Skull)	"*Dendrohyrax adametzi zenkeri*. A.Br. Shadel, A 63.12, Namanjong b/.Lolodorf, Conradt" Vol. 3, p. 48	(A 63.12) "[1 items] Namanjong b/ Lolodorf, 07.VI.12, Conradt S., Ulbrich V"	Lolodorf, Cameroon	Leopold Conradt	'Namanjong' locality could not be traced in today's Cameroon

Dendrohyrax tessmanni Brauer, 1912

MfN specimen. Skull, Skin. ZMB_Mam_21080.

Author of name and type description. August Brauer (1912).

Present name. *Dendrohyrax dorsalis nigricans* Peters, 1879.

Dedication of name (Patronym). Günther Tessmann (1884–1969).

Specimen information in general catalogue. • "*Dendrohyrax adamtzi tessmanni* A. Br *, Fell, Shadel, A 102.09, Akonangi, Tessmann" Vol. 3, p. 48.

Shipment information (A-catalogue number). A 102.09 • "[21 items], 22.IX.09, Tessmann".

Collecting information in description. • "Von Herrn G. Tessmann erhielt das Zoologische Museum das Fell und den Schädel eines neuen großen Baumschliefers, den er in Akonangi (Spanisch-Guinea) erlegt hatte [The Zoological Museum received from Mr G. Tessmann the skin and skull of a large new tree hyrax, which he hunted in Akonangi (Spanish-Guinea)]" (Brauer 1912:411).

Specifics of specimen in the description. Specimen is a male.

Information on specimen. All specimens available.

Collecting locality. Akonangi, Cameroon. The collecting locality "Akonangi" is possibly part of what was considered Cameroon by German troops (Languy et al. 2005).

Collected by. Günther Tessmann (1884–1969).

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Least Concern.

Remarks. Skull label refers to A 108.09 with collection date 22.09.09, but the collecting information for this entry in the A-catalogue is not consistent with its corresponding entry in the general catalogue.

Procavia capensis bamendae Brauer, 1913

MfN specimen. Skull, Skin. ZMB_Mam_21490.

Author of name and type description. August Brauer (1913).

Present name. *Procavia capensis bamendae* Brauer, 1913.

Dedication of name (patronym). Karl Wilhelm Adametz (1877–?).

Specimen information in general catalogue. • "*Procavia kerstingi bamendae*, A. Br., Fell, Schädel, A. 278,12, Bamenda, Adametz" Vol. 3, p. 65.

Shipment information (A-catalogue number). (A. 278.12) • "[28 items], Nord Kamerun, 28. XII.12, Oblt. Adametz".

Collecting information in description. • "Diese neue Art verdankt das Zoologische Museum Herrn Oberleutnant Adametz; ihr Fundort ist Bamenda, Südwestkamerun [The Zoological Museum owes this new species to Lieutenant Adametz; it was found in Bamenda, Southwest Cameroon]" (Brauer 1913:127).

Specifics of specimen in the description. Skull is an adult male.

Information on specimen. All specimens available.

Collecting locality. Bamenda, Cameroon.

Collected by. Karl Wilhelm Adametz (1877–?).

Type status based on description. Holotype (Single specimen).

IUCN Conservation status. Least Concern.

Remarks. Inscription with "A 275.12" cancelled out and slightly wiped off on the skin label and skull inscription, respectively. Shipment information on A 275.12 does not correspond with that in the general catalogue and specimen labels or inscriptions. The correct A-catalogue number should read A 278.12, as written in the general catalogue and verified (14.04.2023).

Order Primates Linnaeus, 1758
Family Cercopithecidae Gray, 1821

Stachycolobus zenkeri Matschie, 1917

MfN specimens. Skins. ZMB_Mam_24217; ZMB_Mam_24219; ZMB_Mam_24221; ZMB_Mam_24645; ZMB_Mam_11472**.** Skulls. ZMB_Mam_24218; ZMB_Mam_24209.

Author of name and type description. Paul Matschie (1917).

Present name. *Colobus satanas* Waterhouse, 1838.

Information on specimen. All specimens available.

Collecting locality. Bipindi, Cameroon.

Collected by. George August Zenker (1855–1922).

Type status based on description. Para-holotype.

IUCN conservation status. Threatened.

Remarks. The description mentions other specimens included. 11472*/24209**, 24217*/24218**, 24645*, 24219*/24220**, 24440**, 24441**, 24442**, 24443**, 24221*/24222**, 4323/10.

where: * Skin specimen; ** Skull specimen; / Skin and corresponding skull.

More specific collection and catalogue information for each specimen are summarised on Table 2.

Erythrocebus langheldi Matschie, 1905

MfN specimen. Skull, Skin. ZMB_Mam_13212.

Author of name and type description. Paul Matschie (1905a).

Present name. *Erythrocebus patas* Schreber, 1775.

Dedication of name (patronym). Wilhelm Langheld (1867–1917).

Specimen information in general catalogue. • "*Erythrocebus langheldi* Mtsch*, Balg, Schädel, I.06, Garua, Benue, Langheld" Vol. 2, p. 138.

Collecting information in description. • "Im hiesigen Zoologischen Garten leben augenblicklich zwei Husarenaffen, die Herr Hauptmann Langheld bei Garua am oberen Benue in Kamerun gesammelt hat. [Two hussar monkeys [common patas monkey], collected by Captain Langheld from Garua on the upper Benue in Cameroon, currently live in the zoological garden [Berlin]" (Matschie 1905a:275).

Specifics of specimen in the description. Young female specimen.

Information on specimen. All specimens available.

Collecting locality. Garoua, Cameroon.

Collected by. Wilhelm Langheld (1867–1917).

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Near Threatened.

Remarks. Matschie identified this specimen as a young female, today (according to information on "Specify") the specimen has been identified as a young male.

Papio yokoensis Matschie, 1900

MfN specimen. Round skin. dummy_4484.

Author of name and type description. Paul Matschie (1900a).

Present name. *Papio hamadryas* Linnaeus, 1758.

Collecting information in description. • "Die Sammlung des Herrn Major von Kamptz enthält folgende Arten. *Papio yokoensis* Mtsch. spec. nov. 2 ♂♂ und 1 ♀ aus Yoko am Sanaga [The collection of Major von Kamptz contains the following species. *Papio yokoensis* Mtsch. spec. nov. 2 ♂♂ and 1 ♀ from Yoko at Sanaga]" (Matschie 1900a:89).

Specifics of specimen in the description. 2 male skins, 2 male skulls and 1 female skin were used for the description.

Table 2. Specifics of Individual *Stachycolobus zenkeri* specimens.

ZMB number (preparation)	Specimen information in the general catalogue	Shipment information (A-number)	Collecting information in the description	Specifics of Specimen in the description	Collecting Date	Type status based on the description
ZMB_Mam_24217 (Skin) And ZMB_ Mam_24218 (Skull)	"♂, *Colobus satanas* Mtsch, Fell, Bipindi, Kamerun, Zenker" Vol. 3, p 175	(A 15.09) "[3 items] Bipindi, 15.IV.1908, Zenker"	ZMB_Mam_24217. "♂ ad. Nr 24217/24217. Fell mit Schädel. Ebendaher und von demselben im Dezember 1907 oder Januar 1908 während der Trockenzeit erbeutet." p. 158. No information for ZMB_ Mam_24218.	Male specimen. The skin ZMB_Mam_24217 associated with the skull ZMB_Mam_24218	22.03.1905	Paratype
ZMB_Mam_24219 (Skin)	"♂ juv. *Colobus satanas* Mtsch, Fell, Bipindi, Kamerun, Zenker" Vol. 3, p. 175	N/A (A-number missing from all sources examined)	"♂ juv. 24219/24220. Fell mit Schädel. Aus der Trockenzeit des Frühjahres 1903. Der Affe war ungefähr 2 1\2 Jahr alt." p. 159	According to the general catalogue and the description, specimen is a Juvenile male, but is identified as a female in "Specify".	Spring 1903	Paratype
ZMB_Mam_24221 (Skin)	"♂ ad, *Colobus satanas* Mtsch, Fell, Bipindi, Kamerun, Zenker" Vol. 3, p. 175	(A 38.03) "[5 items], Bipindi, Kamerun, 6.X.03, G. Zenker"	"Nur ein Fell mit Schädel Nr. 24221/24222, ♂ ad. aus Zenker's Sammlungen" p. 159	Male specimen	06.10.1903	Paratype
ZMB_Mam_24645 (Skin)	"*Colobus satanas*, Fell, A 32.03, Bipindi, Zenker" Vol. 3, p. 192	(A 32.03) "[2 items] Bipindi, 10.II.03, Zenker"	"♀ ad. Nr. 24645. Fell ohne Schädel. Ebendaher und von demselben. Im Dezember 1902 erlegt. Das Fell hat kürzeren Schulterbehang als das vorige." p. 158	Female specimen	10.02.1903	Paratype
ZMB_Mam_11472 (Skin) And ZMB_ Mam_24209 (Skull)	ZMB_Mam_24209. "♂ *Stachycolobus zenkeri* Mtsch*, Waterh., Schädel, A 62.04, Bipindi, Zenker,Fell 11472" Vol. 3, p. 174. ZMB_Mam_11472. "♂*, *Colobus satanas* Waterh. Balg, 5.1.98, Bipindi, Kamerun, Zenker. Typus von *Stachycolobus zenkeri* Mtsch., Zur Schädel 24209" Vol. 2, p. 62	(A 62.04) "[34 items] 7 skins, 10 skulls, 2 skeleton, 6 animals in alcohol, 9 embryos], Bipindi, Zenker, 26.IV.04"	"Typus: ♂ ad. Nr. 11472/24209. Fell mit Schädel. Von G. Zenker im September oder Oktober 1897 bei Bipindi am Lokundje in Kamerun während der Regenzeit erbeutet." p. 158	Male specimen. Designated Holotype	05.01.1898	Holotype

Information on specimen. Specimen available.

Collecting locality. Yoko, Cameroon.

Collected by. Oltwig von Kamptz (1857–1921).

Type status based on description. Syntypes.

IUCN conservation status. Least concern.

Remarks. 'dummy' specimen has no ZMB number and no A-catalogue number. According to "Specify", the valid name for *Papio yokoensis* is *Papio hamadryas*.

Piliocolobus preussi Matschie, 1900

MfN specimen. Skin. ZMB_Mam_6588.

Author of name and type description. Paul Matschie (1900c).

Present name. *Piliocolobus preussi* Matschie, 1900.

Specimen information in general catalogue. • "*Colobus temminckii*, Kühl Fell ohne Schadel, Barombi, Kamerun, Preuss; Typus von *Piliocolobus preussi* Mtsch." Vol. 1. p. 236.

Collecting information in description. • "von Dr. Preuss bei Barombi am Elefanten-See in Nord-Kamerun [by Dr. Preuss on the Elephant Lake at Barombi in north Cameroon]" (Matschie 1900c:183).

Specifics of specimen in the description. Male specimen.

Information on specimen. Specimen available.

Collecting locality. Barombi Mbo, Cameroon.

Collected by. Paul Rudolph Preuss (1861–1926).

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Critically Endangered.

Remarks. The general catalogue entry for 6588 states "*Colobus temminckii*, Kühl…Typus von *Piliocolobus preussi* Mtsch". Both species are mentioned in the same description as different species, but the reason for this name change in the general catalogue is not clear.

Order Primates Linnaeus, 1758
Family Hominidae Gray, 1825

Gorilla diehli Matschie, 1904

MfN specimens. Skulls. ZMB_Mam_12789; ZMB_Mam_12790; ZMB_Mam_12792; ZMB_Mam_12793; ZMB_Mam_12794; ZMB_Mam_12795; ZMB_Mam_12796.

Skull and skeleton parts. ZMB_Mam_12791.

Author of name and type description. Paul Matschie (1904).

Present name. *Gorilla gorilla diehli* Matschie, 1904.

Dedication of name (Patronym). Adolf Diehl (1870–1943).

Collecting information in description. • "Herr Diehl sammelte in dem Gebiete des Mun-Aya oder Wadye, der in den Cross-Fluss strömt, 4 Schädel von ausgewachsenen männlichen, 5 Schädel von ausgewachsenen weiblichen Gorillas [Mr. Diehl collected in the area of the Mun-Aya or Wadye, which flows into the Cross River, 4 skulls of adult male, 5 skulls of adult female gorillas]" (Matschie 1904:52).

Information on specimen. All specimens are available.

Collected by. Adolf Diehl (1870–1943).

Type status based on description. Para-holotype.

IUCN conservation status. Critically Endangered.

General remark. A-catalogue number, collection and accession dates missing from all historical sources examined. Although the original description mentions nine specimens, only eight specimens are indicated for this species on "Specify".

More specific collection and catalogue information for each specimen are summarised on Table 3.

Gorilla hansmeyeri Matschie, 1914

MfN specimens. Skull, Skeleton. ZMB_Mam_17960. Skin. ZMB_Mam_17961.

Author of name and type description. Paul Matschie (1914).

Present name. *Gorilla gorilla gorilla* Savage, 1847.

Dedication of name (patronym). No specific mention of a dedication, nevertheless, refers to the supplier Hans Meyer (1877–1964).

Specimen information in general catalogue. • "♂ *Gorilla hansmeyeri*, Mtsch. * Typ, Fell, Bunda und Dume, Kamerun, Peters. Geh, Prof. Hans Meyers. S." Vol. 2, p. 339.

Collecting information in description. • "Typus. ♂ ad. 17 961 in der Schausammlung des Berliner Zoologischen Museums aufgestellt, hierzu Skelet 17 960. Von Feldwebel Peter am 27. Januar 1907 auf der Straße von Assobam zwischen Mensima und Bimba südlich Dumeflusse westlich von Mokbe erlegt und von Geheimrat Professor Dr. Hans Meyer in Leipzig geschenkt [Type. ♂ ad. 17961 placed in the display collection of the Berlin Zoological Museum, associated with skeleton 17960. Shot by Sergeant Peter on 27 January 1907 on the Assobam Road between Mensima and Bimba south of Dumé River west of Mokbe and donated by Professor Dr. Hans Meyer in Leipzig]" (Matschie 1914:325).

Specifics of specimen in the description. • "Typus. ♂ ad. 17961 in der Schausammlung des Berliner Zoologischen Museums aufgestellt, hierzu Skelet 17960 [translation: Type. ♂ ad. 17961 displayed in the exhibition of the Berlin Zoological Museum, refers to skeleton 17960]" (Matschie 1914:325).

Information on specimen. Skin, available; Skull, Skeleton not available.

Collecting locality. • "zwischen Bumba und Dume, Kamerun [between Bumba and Dumé, Cameroon]".

Collected by. Peter Scheunemann (1870–1937).

Collecting date. 27.01.1907.

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Critically Endangered.

Remarks. Skull and skeleton not accessed as of 09.12.2022. The skull and skeleton 17960 are described to be associated with the skin 17961. Based on the de-

Table 3. Specifics of Individual *Gorilla diehli* specimens.

MfN specimen	Specimen Information in the general catalogue	Specifics of specimen in the description	Collecting locality	Type status	Specific remarks
ZMB_Mam_12789 (skull)	"♂ *Gorilla diehli* Mtsch*, Schädel mit Unterkiefer, Dakbe, Cross-Flussgebiet Diehl S.G" Vol. 2, p. 121	Adult Male	Takpe, Cameroon	Holotype	Skull with mandible. Verbatim locality 'Dakbe', in Cameroon could not be traced. Sarmiento and Oates (2000) confirmed *Gorilla gorilla diehli* as a distinct subspecies and identified the collection locality as Takpe. p 12
ZMB_Mam_12792 (skull)	"♂ *Gorilla diehli* Mtsch*, Schädel mit Unterkiefer, Dakbe, Cross-Flussgebiet Diehl S.G" Vol. 2, p. 121	Adult Male. "Diese Schädel sind zum Theil durch Brand verletzt" (page 52)	Takpe, Cameroon	Paratype	The specimen appears burnt. Matschie wrote that it probably served as a fetish object before collection, hence supposedly possessed mystical powers. The general catalogue states that the mandible for this skull is available, but it is absent. The specimen box includes a tube containing a loose tooth from the skull.
ZMB_Mam_12790 (skull)	"♂, *Gorilla diehli* Mtsch*, Schädel mit Unterkiefer, von Gadyifu bei Oboni erlegt., Diehl S.G" Vol. 2, p. 121	Adult Male	Obonyi, Cameroon	Paratype	Skull with mandible
ZMB_Mam_12791 (skull and skeleton parts)	"♂ *Gorilla diehli* Mtsch*, Schädel mit Unterkiefer, Oboni, Diehl S.G" Vol. 2, p. 121	Adult Male. "Diese Schädel sind zum Theil durch Brand verletzt" (page 52)	Obonyi, Cameroon	Paratype	The specimen appears burnt. Matschie wrote that it probably served as a fetish object before collection, hence supposedly possessed mystical powers. The general catalogue states that the mandible for this skull is available, but it is absent.
ZMB_Mam_12796 (ZMB_Mam_85826) (skull)	"♀ *Gorilla gorilla diehli*, Sch Ukf, Oboni, Diehl, Paratypus" Vol. 9, p. 241	Adult Female	Obonyi, Cameroon	Paratype	Skull without mandible. Specimen in General catalogue as ZMB_Mam_85826
ZMB_Mam_12793 (skull)	"♀ *Gorilla diehli* Mtsch*, Schädel ohne Unterkiefer, Basho, Diehl S.G" Vol. 2, p. 121	Adult Female	Basho, Cameroon	Paratype	Skull without mandible.
ZMB_Mam_12794 (skull)	"♀ *Gorilla diehli* Mtsch*, Schädel ohne Unterkiefer, Basho, Diehl S.G" Vol. 2, p. 121	Adult Female. "Diese Schädel sind zum Theil durch Brand verletzt" (page 52)	Basho, Cameroon	Paratype	Skull without mandible. The specimen appears burnt. Matschie wrote that it probably served as a fetish object before collection, hence supposedly possessed mystical powers. The general catalogue states that the mandible for this skull is available, but it is absent.
ZMB_Mam_12795 (ZMB_Mam_85825) (skull)	"*Gorilla gorilla diehli*, Sch Ukf, Basho/ Kamerun, Diehl, Paratypus" Vol. 9, p. 241	Adult Female	Basho, Cameroon	Paratype	Skull without mandible. Matschie identified this specimen as a female, but is identified as a male on "Specify". The specimen box includes a tube containing a loose tooth from the skull. Specimen available in General catalogue as ZMB_Mam_85825

scription, this skin should be labelled 17961, but the label on the skin specimen reads 17960.

Gorilla zenkeri Matschie, 1914

MfN specimens. Skull. ZMB_Mam_30261(2); Skin, Skeleton. ZMB_Mam_30260.

Author of name and type description. Paul Matschie (1914).

Present name. *Gorilla gorilla gorilla* Savage, 1847.

Dedication of name (patronym). No particular mention of a dedication, nevertheless name refers to supplier George Zenker (1855–1922).

Specimen information in general catalogue. • "♂*Gorilla zenkeri* Mtsch *, Fell, Schädel, Skelett, 15.09 [this is the A number], Mbiawe, Lokundje, Zenker "Vol. 4, p. 11.

Shipment information (A-catalogue number). A 15.09 • "[3 items], Bipindi, 14. IV.08, Zenker".

Collecting information in description. • "Typus. ♂ juv. ad. A. 15, 09, 1. Fell aufgestellt. Skelet vorhanden. Von G. Zenker bei Mbiawe am Lokundje, 6 Stunden flußabwärts von Bipindi am weißen Berge im Januar 1908 gesammelt [Type. ♂ juv. ad. A. 15, 09, 1. Skin mounted. Skeleton present. Collected by G. Zenker at Mbiawe in Lokundje, 6 hours downstream from Bipindi on White Mountain in January 1908]" (Matschie 1914:325–326).

Specifics of specimen in the description. Male specimen • "Die Gesichtshaut war an vielen Stellen krankhaft verändert, ähnlich wie bei Lues…Die Sutura basilaris ist noch geöffnet. Das linke Auge war zerstört. Im Schädel sitzt dicht am unteren Rande der Augenhöhle im Jugale ein Stück Eisen. Am rechten Rande des Planum nuchale auf der Sutura occipito-mastoidea ist eine verheilte Verletzung des Knochens sichtbar [The face skin was abnormally damaged in many places, similar to lues [syphillis]...The sutura basilaris is still open. The left eye was damaged. In

the skull, close to the lower edge of the orbit in the jugal bone, lies a piece of iron. On the right edge of the planum nuchale on the sutura occipito-mastoidea a healed injury of the bone is visible]" (Matschie 1914:327).

Information on the specimen. Skull, available; Skin, Skeleton, not available.

Collecting locality. Mbiawe [Mbiame?], Cameroon.

Collected by. Georg Zenker (1855–1922).

Collecting date. 01.1908.

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Critically Endangered.

Remarks. Skin and skeleton specimens are not accessible as of 21.12.2022. The skull ZMB_Mam_30261(2) is now changed to ZMB_Mam_30260 i.e. associated with the same inventory number as its skin and skeleton.

Gorilla jacobi Matschie, 1905

MfN specimens. Skulls. ZMB_Mam_83558; ZMB_Mam_83862.

Author of name and type description. Paul Matschie (1905b).

Present name. *Gorilla gorilla gorilla* Savage, 1847.

Dedication of name (patronym). No mention of a dedication, nevertheless, refers to the name of supplier Gerhard Jacob (1878–1914).

Specimen information in general catalogue. ZMB_Mam_83558 • "♂, *Gorilla gorilla*, Sch, Lobo-mündung, Kam., Jacob, A 28,05 / 10.VII.05, 2" Vol. 9, p. 149.

ZMB_Mam_83862 • "**Gorilla jacobi* , Matschie 1905, Sch, Lobo-mündung, Kamerun, Jacob, Holotypus unter Vorbehalt; ♀ A 28,05 1, ♀ von Matschie unter 28051" Vol. 9, p. 161.

Shipment information (A-catalogue number). A 28.05 • "[35 items], Lobo-Mündung, Süd-Kamerun, 10.VII.05, Lt. Jacob".

Collecting information in description. • "Einen Schädel den Herr Leutnant Jacob auf der Station Lobo-Mündung (…) [A skull found by Lieutenant Jacob at the River Lobo Estuary Station]" (Matschie 1905b:282).

Specifics of specimen in the description. Male specimen ZMB_Mam_83558. Female specimen ZMB_Mam_83862. Both with forward protruding eyebrows, broad faces and occiputs.

Information on specimens. All specimens available.

Collecting locality. Lobo River Estuary, Cameroon.

Collected by. Gerhard Jacob (1878–1914).

Type status based on description. Syntypes.

IUCN conservation status. Critically Endangered.

Remarks • The skull ZMB_Mam_28051 (Matschie 1905b:282), is confirmed today as ZMB_Mam_83862. The skull ZMB_Mam_83558 is a skull without a mandible.

Anthropopithecus reuteri Matschie, 1914

MfN specimens. Skull and Skin. ZMB_Mam_83869. Skeleton. ZMB_Mam_83700.

Author of name and type description. Paul Matschie (1914).

Present name. *Pan troglodytes* Blumenbach, 1775.

Dedication of name (patronym). Franz Reuter (?–?).

Specimen information in general catalogue. ZMB_Mam_83869 • "*♂ ad, *Anthropopithecus reuteri* Matschie 1914, Sch, Dumemündung, Kamerun, F. Reuter 1908, A 39.09.1? Holotypus Sk. of 83700" Vol. 9, p. 161

ZMB_Mam_83700 • "**Pan troglodytes*, Sk, Dumemündung, Kam., Reuters 29. VI.1909, A 39.09, Siehe Sch 83869" Vol. 9, p. 154.

Shipment information (A-catalogue number). A 39.09 • "Düme, 29. VI.09, Reuter".

Collecting information in description. • "*Pan* —? Specimen from Dünne, the interior of Southern Cameron, Elliot, 1. c. III, 252, Typus. ♂ ad. A. 39, 09, 1. Fell mit Skelet. In der Nähe der Einmündung des Dume-Flusses in den Kadei in Kamerun von, Oberleutnant Franz Reuter † im Herbst 1908 erlegt [Type. ♂ adult A 39.09,1. Skin with skeleton. Hunted by Oberleutnant Franz Reuter † in Autumn 1908, in the vicinity of the confluence of River Dumé and River Kadeï in Cameroon]" (Matschie 1914:328).

Specifics of specimen in the description. Male fur with skeleton and skull.

Information on the specimen. Skull and Skeleton are available, but Skin is not available.

Collecting locality. Doumé River Estuary, Cameroon.

Collected by. Franz Reuter (1881–1908).

Collecting date. Autumn 1908.

Type status based on description. Holotype (single specimen).

IUCN conservation status. Endangered.

Remarks. Skin not found as of 05.01.2023.

Anthropopithecus oertzeni Matschie, 1914

MfN specimens. Skin. ZMB_Mam_83867. Skeleton. ZMB_Mam_83716.

Author of name and type description. Paul Matschie (1914).

Present name. *Pan troglodytes* Blumenbach, 1775.

Dedication of name (Patronym). Jasper Martin Otto von Oertzen (1880–1948).

Specimen information in general catalogue. • "*♂ Juv. *Pan Troglodytes*, F + Sk, Bascho, Kamerun, Oertzen 29. VI.1909, A60.05 I".

Skin ZMB_Mam_83867, Vol. 9, p. 161; Skeleton ZMB_Mam_83716, Vol. 9, p. 155.

Shipment information (A-catalogue number). A 60.05 • "[89 items], Säugetier von Bascho, Nord.Kamerun, 20. XI.05, Leutenant von Oertzen".

Collecting information in description. • "*Pan* —? Specimen from Basho. Elliot, 1. c. III, 252 partim. Typus. ♂ ad. A. 60, 05, 1. Fell mit Skelet ohne Schädel. (Der Schädel ist im Besitz des Herrn Hauptmann v. Oertzen). Von diesem im Jahre 1905 in der Nähe von Bascho in Nordkamerun gesammelt.[Type. ♂ ad. A 60.05,1. Skin with skeleton without skull. (The skull is property of Mr

Hauptmann v. Oertzen). Collected in 1905 in the vicinity of Baschéo in north Cameroon" (Matschie 1914:327).

Specifics of specimen in the description. The specimen is a male skin with a skeleton and no skull.

Information on specimen. All specimens available.

Collecting locality. Bashéo, Cameroon.

Collected by. Jasper Martin Otto von Oertzen (1880–1948).

Collecting date. 20.11.1905.

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Endangered.

Remarks. The label for skeleton ZMB_Mam_83716 is also attached to the skin specimen.

Anthropopithecus papio Matschie, 1919

MfN specimens. Skull, Round skin. ZMB_Mam_83865.

Author of name and type description. Paul Matschie (1919).

Present name. *Pan troglodytes* Blumenbach, 1775.

Specimen information in general catalogue. • "*♂, *Anthropopithecus papio* Matschie 1919, Sch B, J.-Albrechtshohe, Kamerun, Puttkammer G.S 1903, A 48.03 Syntypus, beschr. Zeitsch. f. Ethnologie 1919, H 1. p 79/80" Vol. 9, p. 161.

Shipment information (A-catalogue number). A 48.03 • "[2 items], Fell mit Schädel von *Anthropopithecus*, Albrechtshohe, Kamerun, 30.VI.03, von Puttkammer".

Collecting information in description. • "Bei Barombi am Elefanten-See in der nächsten Nähe der Station Johann Albrechtshöhe nordwestlich von Mundame zwischen dem oberen Mungo und dem zum Oberen Meme abwässernden Uwe hat Herr Gouverneuer J. v. Puttkamer im Februar 1903 einen männlichen Schimpansen erlegt [Governor J. v. Puttkamer hunted a male chimpanzee in February 1903, near Barombi at the Elephant lake, close to the Station Johann Albrechtshöhe, northwest from Mundame, between the Upper Mungo and the drainage basin of the Uwe River]" (Matschie 1919:79).

Specifics of specimen in the description. Male specimen • "Dieser Schimpanse, den man wegen seiner dem Pavian ähnlich vorspringendee Schnauze *Anthropopithecus papio* nennen könnte [This chimpanzee could be called *Anthropopithecus papio* because of its protruding snout similar to that of the baboon]" (Matschie 1919:80).

Information on specimen. All specimens available.

Collecting locality. Barombi (Lake Barombi Mbo) Mountains, near Kumba, Cameroon.

Collected by. Jesco von Puttkamer (1855–1917).

Collecting date. 02.1903.

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Endangered.

Anthropopithecus ellioti Matschie, 1914

MfN specimens. Skin. ZMB_Mam_83868. Skeleton. ZMB_Mam_83709.

Author of name and type description. Paul Matschie (1914).

Present name. *Pan troglodytes ellioti* Matschie, 1914

Dedication of name (patronym). Daniel Giraud Elliot (1835–1915).

Specimen information in general catalogue. • "**Pan troglodytes*, F + Sk, Basho, Kam., v. Oertzen, A 60.05 II." ZMB_Mam_83868, Vol. 9, p. 161; ZMB_Mam_83709, Vol. 9, p. 155.

Shipment information (A-catalogue number). A 60.05 • "[89 items], Säugetier von Bascho, Nord.Kamerun, 20. XI.05, Leutenant von Oertzen".

Collecting information in description. • "Als Typus von *A. ellioti* möge das ♂ ad. A. 60, 05, 2 Fell ohne Schädel gelten, das in der Nähe von Bascho durch Herrn v. Oertzen gesammelt worden ist; den Schädel hat der Sammler behalten [Type for *A. ellioti* is possibly the ♂ adult A 60.05, 2 skins without skulls, which were captured in the vicinity of Bascho by Mr. v. Oertzen; the collector kept the skull]" (Matschie 1914:327).

Specifics of specimen in the description. The specimen is a male skin with a skeleton - no skull.

Information on specimen. All specimens available.

Collecting locality. Bashéo, Cameroon.

Collected by. Jasper Martin Otto von Oertzen (1880–1948).

Collecting date. 20.11.1905.

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Endangered.

Remarks. The label for skeleton ZMB_Mam_83709 is also attached to the skin specimen.

Order Proboscidea Illiger, 1811
Family Elephantidae Gray, 1821

Elephas (Loxodonta) cyclotis Matschie, 1900

MfN specimen. Skull. ZMB_Mam_13501.

Author of name and type description. Paul Matschie (1900d).

Present name. *Loxodonta cyclotis* Matschie, 1900.

Specimen information in general catalogue. • "♂ *Loxodonta cyclotis* Mtsch *, Schädel, 21.VIII.07" Vol. 2, p. 151

Collecting information in description • "Als Original-Exemplar diene das von Herrn Oberleutnant Dominick dem hiesigen Zoologischen Garten überwiesene Männchen [Original specimen is the male shipped to the Zoological Garden by Oberleutnant Dominik" (Matschie 1900d:194).

Specifics of specimen in the description. • "Männchen [male]" (Matschie 1900d:194).

Information on specimen. Specimen available.

Collecting locality. Yaounde, Cameroon.

Collected by. Hans Dominik (1870–1910).

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Critically Endangered.

Remarks. This individual was described as a new species while still alive in the Berlin Zoological Garden, its oval ear lobes being the main defining morphological character considered by Matschie. It was called by the colonial press as "the first German elephant" and died in the Zoo in 20.05.1907, after which its skull was accessioned to the MfN. The skull possibly underwent autopsy and a calotte was cut from the main skull, the lower mandible was also present.

Order Rodentia Bowdich, 1821
Family Anomaluridae Gervais, 1849

Idiurus zenkeri Matschie, 1894

MfN specimen. Skull, Skin and Body in alcohol. ZMB_Mam_7993.

Author of name and type description. Paul Matschie (1894).

Present name. *Idiurus zenkeri* Matschie, 1894.

Specimen information in general catalogue. • "*7993♀, *Idiurus zenkeri* Mtsch, F Sch. K, A. 3.93, Yaunde, Kamerun, G. Zenker" Vol. 1, p. 286.

Shipment information (A-catalogue number). A 3.93 is an older A-catalogue number that could not yet be traced in the archival materials.

Specifics of specimen in the description. • "Das vorliegende Exemplar ist ein sehr altes Weibchen [The present specimen is a very old female]" (Matschie 1894:200).

Information on specimen. All specimens available.

Collecting locality. Yaoundé, Cameroon.

Collected by. George Zenker (1855–1922).

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Least Concern.

Remarks. Only the body is in alcohol; the skin is a dry specimen.

Zenkerella insignis Matschie, 1898

MfN specimens. Skull, Skeleton parts, Round Skin. ZMB_Mam_10085.

Author of name and type description. Paul Matschie (1898).

Present name. *Zenkerella insignis* Matschie, 1898.

Specimen information in general catalogue. • "♂ *Zenkerella insignis* Mtsch *, Fell Sch, A 3 98, Yaunde, Zenker, 13.5.98" Vol. 2, p. 5.

Shipment information (A-catalogue number). A 3.98 is an older A-catalogue number that could not yet be traced in the archival materials.

Collecting information in description. • "Hab. Kamerun, Afr. occ, Yaunde. Zenker coli [Provenance Cameroon, West Africa, Yaoundé, Zenker's shipment]" (Matschie 1898:24).

Specifics of specimen in the description. According to Matschie, the specimen was in poor condition and the hair fell off the skin easily, measurements of the ear and feet are only approximate. The specimen was likely a male juvenile. (Matschie 1898:24).

Information on specimen. All specimens available.

Collecting locality. Yaoundé, Cameroon.

Collected by. George Zenker (1855–1922).

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Least Concern.

Family Muridae Illiger, 1811

Mus (nannomys) setulosus Peters, 1876

MfN specimen. Specimen in alcohol. ZMB_Mam_5047

Author of name and type description. Wilhelm Peters (1876).

Present name. *Mus setulosus* Peters, 1876.

Specimen information in general catalogue • "**Mus (Nannomys) setulosus* Pter* Victoria Aug. 74 Buchholz" Vol. 1, p. 183.

Collecting information in description. • "Ein Männchen wurde im August 1874 in Victoria gefangen, ein jüngeres Weibchen brachte Hr. Dr. Reichenow von Cameruns [A male was captured in Victoria in August 1874, a younger female was brought by Dr. Reichenow from Cameruns[sic]]" (Peters 1876:481).

Specifics of specimen in the description. Male specimen • "was ich zur Begründung einer neuen Untergattung, *Nannomys*, anführe, den ersten Backzahn viel länger, als die beiden andern zusammengenommen [what I use to justify a new subgenus, *Nannomys*, the first molar is much longer than the other two taken together]" (Peters 1876:481).

Information on specimen. Specimen available.

Collecting locality. Limbe, Cameroon.

Collected by. Reinhold Buchholz (1837–1876).

Collecting date. 08.1874.

Type status based on description. Syntypes.

IUCN conservation status. Least concern.

Remarks. The description is 'Peters 1876', but the jar label reads 'Peters 1852', no description for 'Peters 1852' for this species could be traced. The description 'Peters 1876' also mentions a female of the species collected by Reichenow and delivered to Peters, but this specimen which constitutes the other syntype of this species could not be traced at time of publication.

Family Sciuridae Fischer de Waldheim, 1817

Sciurus auriculatus Matschie, 1891

MfN specimens. Skin. ZMB_Mam_46674. Round Skin. ZMB_Mam_46675.

Author of name and type description. Paul Matschie (1891).

Present name. *Funisciurus leucogenys auriculatus* Matschie, 1891.

Specimen information in general catalogue. ZMB_Mam_46674 • "[1 specimen] **Funisciurus leucogenys*, Fell, Barombe, Preuß, 1891" Vol. 5, p.270.

ZMB_Mam_46675 • "[1 specimen] **Funisciurus leucogenys* Mtsch, Balg, Kamerun, Dr. Preuß" Vol. 5, p. 270.

Specifics of specimen in the description. Male specimen. "3 Felle ohne Schädel. [3 skins without skull]" (Matschie 1891:353).

Information on specimen. All specimens available.

Collecting locality. Barombi Mbo, Cameroon.

Collected by. Paul Rudolph Preuss (1861–1926).

Type status based on description. Syntypes.

IUCN conservation status. Least Concern.

Remarks. The description mentions three skins. Only two skins are mentioned in "Specify", one skin is still unaccounted for.

Sciurus calliurus Peters, 1874

MfN specimen. Skull, Skin. ZMB_Mam_4696.

Author of name and type description. Wilhelm Peters (1874).

Present name. *Protoxerus stangeri* Waterhouse, 1842.

Specimen information in general catalogue. • "*Sciurus calliurus* Buchholtz*, Mai, Mungo Cameroon, Buchholz 4696" Vol. 1, p. 171.

Collecting information in description. • "Ein männliches Exemplar in Mungo, am 11. Mai 1874 erlegt. Ausser dieser Art wurde auch *Sc. pyrrhopus* Fr. Cuv. in derselben Gegend gefunden [One male specimen hunted in Mungo, in 11 May 1874. Besides this species, *Sc. pyrrhopus* Fr. Cuv. was also found in the same location]" (Peters, 1874:708).

Specifics of specimen in the description. Male specimen.

Information on specimen. Only skin specimen was available for consultation.

Collecting locality. Mungo, Cameroon.

Collected by. Reinhold Buchholz (1837–1876).

Collecting date. 11.05.1874.

Type status based on description. Holotype (single specimen).

IUCN conservation status. Least Concern.

Remarks. Skull specimen could not be assessed as of 24.11.2022.

Order Eulipotyphla Waddell et al., 1999
Family Soricidae Fischer, 1814

Crocidura vulcani Heim de Balsac, 1956

MfN specimen. Skull, Skin. ZMB_Mam_91354.

Author of name and type description. Heim de Balsac (1956).

Present name. *Crocidura virgata* Sanderson, 1940.

Specimen information in general catalogue. • "**Crocidura vülcani* von Prof. Heim de Balsac, F Sch, 58/45/11/7, A _39, Kamerunberg, Kamerun 1600 m, 4.5.1938, Dr. Martin Eisentraut, Buhr S." Vol. 10, p. 56.

Shipment information (A-catalogue number). A_39 [Incomplete shipment information in general catalogue; shipment number not given].

Collecting information in description. • "Peau (sans sexe indiqué) et crane d'un specimen provenant du cratère Bibundi (1.600 m), Mt. Cameroun, 4–5-1938, Musée de Humboldt, Berlin, n° 91354. Procurée par M. Eisentraut [Skin (no sex indicated) and skull of a specimen from the Bibundi crater (1,600 m), Mount Cameroon, 4–5-1938, Humboldt Museum, Berlin, n° 91354. Procured by Mr. Eisentraut]" p. 134.

Specifics of specimen in the description. Mounted skin. No sex indicated on either specimen.

Information on specimen. All specimens available.

Collecting locality. Bibundi Crater, Mount Cameroon.

Collected by. Martin Bruno Eisentraut (1902–1994).

Collecting date. 04.05.1938.

Type status based on description. Holotype (Single specimen).

IUCN conservation status. Least Concern.

Remarks. According to Turni et al. (2007), for *Crocidura vulcani*, the valid name today is *Crocidura virgata*.

Crocidura dolichura Peters, 1876

MfN specimen. Skull, Skin. ZMB_Mam_5037.

Author of name and type description. Wilhelm Peters (1876).

Present name. *Crocidura dolichura* Peters, 1876.

Specimen information in general catalogue. • "*Crocidura (Crocidura) dolichura*, Pter*, Fem., Bonjongo, Buchholtz" Vol. 1, p. 183.

Collecting information in description. • "Ein weibliches Exemplar dieser ausgezeichneten Art aus Bonjongo [A female specimen of this magnificent species from Bonjongo]" (Peters 1876:476).

Specifics of specimen in the description. Female specimen.

Information on specimen. All specimens available.

Collecting locality. Bonjongo, Cameroon.

Collected by. Reinhold Buchholz (1837–1876).

Type status based on description. Holotype (single specimen).

IUCN Conservation status. Least concern.

Remarks. Both skin and skull specimens are available and observed on 06.01.2023, but only the skull specimen is mentioned in "Specify" at the time of publication.

Myosorex preussi Matschie, 1893

MfN specimen. Skull, skin. ZMB_Mam_6990. Skull, skin. ZMB_Mam_6991. Skull, skin. ZMB_Mam_6992.

Author of name and type description. Paul Matschie (1893).

Present name. *Sylvisorex morio* Gray, 1862.

Specimen information in general catalogue. • "*Myosorex preussi* Mtsch*, Fell m. Schädel, Buea, Preuss" Vol. 1, p. 249.

Collecting information in description. • "Die drei vorliegenden Stücke wurden in der Umgebung von Buea auf dem Kamerun-Gebirge von Dr. Preuss gefangen [The three present pieces were caught in the vicinity of Buea on the Cameroon Mountains by Dr. Preuss]" (Matschie 1893:178).

Specifics of specimen in the description. Three female specimens.

Information on specimen. All specimens available.

Collecting locality. Buea, Cameroon.

Collected by. Paul Rudolph Preuss (1861–1926).

Type status based on description. Syntypes.

IUCN conservation status. Endangered.

Remarks. According to Turni et al (2007), for *Myosorex preussi* the valid name, today is *Sylvisorex morio*.

Conclusion

The analysis of type specimens from the MfN mammal collections presented here illustrates the complexity of dealing with historical natural history collection records. This assessment attempted, for the first time, to identify all type material identified in the catalogue as originating from a particular geographical location, that was also a political unit defined at that time as German 'Kamerun.' The type status, collecting localities, collectors and dates mentioned herein are based on an assessment of the available information from catalogues, specimen tags and descriptions. Most of the specimens examined have incomplete collection records due to diverse circumstances, including insufficient labelling at the time of collection, shipping, accession, description and storage. We assume that further information on these collecting events can be determined with further provenance research. We hope this work contributes to an understanding of how natural history specimens are catalogued and stored in the MfN collections and encourage further studies on all West African collections in the MfN and other Western museums. Hence, further funding for projects, such as the one presented here, is crucial for an assessment of museum storage processes and past collecting practices. Our study also attempts to disambiguate the documented type specimen localities of collection in the hope to facilitate a future determination of these localities and, as such, an increasingly detailed understanding of the faunal situation from the perspective of geographical region, which may include flagging endemic species, their abundance and distribution over time, potentially contributing to a better and shared knowledge of global and local biodiversity.

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References

Acharya N, Subedi MN (2005) Type specimens. Bulletin of Department of Plant Resources, Kathmandu, Nepal., 1–2. http://kath.gov.np/image/data/TYPE%20SPECIMEN.pdf

Ade M, Frahnert S, Starck C (2001) Analysing databases of Southern African material at the Museum für Naturkunde in Berlin. Mitteilungen aus dem Museum für Naturkunde in Berlin, Zoologische Reihe 77: 325–331 https://doi.org/10.1002/mmnz.4850770215

Ashby J, Machin R (2021) Legacies of colonial violence in natural history collections. Journal of Natural Science Collections 8: 45. http://www.natsca.org/sites/default/files/publications/JoNSC-Vol8-Ashby_and_Machin_2021_0.pdf [May 21, 2023]

Boakes EH, McGowan PJK, Fuller RA, Chang-qing D, Clark NE, O'Connor K, Mace GM (2010) Distorted views of biodiversity: Spatial and temporal bias in species occurrence data. PLoS Biology 8: e1000385. https://doi.org/10.1371/journal.pbio.1000385

Bogutskaya NG, Mikschi E, Riedl MD, Szeiler S, Frade PR, Palandačić A (2022) An annotated catalogue of the type specimens described by Maximilian Holly housed in the Natural History Museum of Vienna. Part. 1. Chordata: Actinopterygii and Echinodermata: Asteroidea. Annalen des Naturhistorischen Museums in Wien. Serie B für Botanik und Zoologie 124: 20–21.

Brauer A (1912) Zwei neue Baumschlieferarten aus Westafrika. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1912: 411–414. https://www.biodiversitylibrary.org/page/43604471

Brauer A (1913) Weitere neue *Procavia*- Arten aus dem Kgl. Zoologischen Museum in Berlin. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1913: 125–127. https://www.biodiversitylibrary.org/page/43606987

Brauer A (1914) Neue Klipp- und Baumschliefer aus Südwest- und Westafrika. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1914: 38–39. https://www.biodiversitylibrary.org/page/43608067

Heim De Balsac H (1956) Diagnoses De *Crocidura* Inédites D'afrique Occidentale. Mammalia 20(2): 131–139. https://doi.org/10.1515/mamm.1956.20.2.131

Holmes MW, Hammond TT, Wogan GOU, Walsh RE, LaBarbera K, Wommack EA, Martins FM, Crawford JC, Mack KL, Bloch LM, Nachman MW (2016) Natural history collections as windows on evolutionary processes. Molecular Ecology 25: 864–881. https://doi.org/10.1111/mec.13529

International Commission on Zoological Nomenclature, Ride WDL, International Trust for Zoological Nomenclature, Natural History Museum (London, England), International Union of Biological Sciences [Eds] (1999) International code of zoological nomenclature: Code international de nomenclature zoologique. 4th edn. International Trust for Zoological Nomenclature, Natural History Museum, London.

Johnson KG, Brooks SJ, Fenberg PB, Glover AG, James KE, Lister AM, Michel E, Spencer M, Todd JA, Valsami-Jones E, Young JR, Stewart JR (2011) Climate Change and Biosphere Response: Unlocking the Collections Vault. BioScience 61: 147–153. https://doi.org/10.1525/bio.2011.61.2.10

Kaiser K (2021) Wirtschaft, Wissenschaft: Die Botanische Zentralstelle für die deutschen Kolonien am Botanischen Garten und Museum Berlin (1891–1920). Peter Lang, Berlin.

Languy M, Bobo KS, Njie FM, Njabo KY, Lapios JM, Demey R (2005) New bird records from Cameroon. Malimbus 27: 1–12. https://free.fr/articles/V27/27001012.pdf

Matschie P (1891) Über einige Säugetiere aus Kamerun und dessen Hinterlande. Archiv für Naturgeschichte 57: 351–356. https://www.biodiversitylibrary.org/page/6400758

Matschie P (1893) Einige afrikanische Säugethiere. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin: 175–178. https://doi.org/10.5962/bhl.part.9925

Matschie P (1894) Neue Saugetiere aus den Sammlungen der Herren Zenker, Neumann, Stuhlmann und Emin. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1894: 197–203. https://www.biodiversitylibrary.org/page/43581304

Matschie P (1898) Eine neue mit *Idiurus* Mtsch. verwandte Gattung der Nagetiere. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1898: 23–30. https://www.biodiversitylibrary.org/page/8790743

Matschie P (1900a) Einige Säugetiere aus dem Hinterlande von Kamerun. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin, 87–100. https://www.biodiversitylibrary.org/item/35603#page/9/mode/1up

Matschie P (1900b) Über die Fleckenhyäne des Hinterlandes von Kamerun. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin, 211–215. https://www.biodiversitylibrary.org/page/8797217

Matschie P (1900c) Über einige Formen der Gattung *Colobus*. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1900: 181–189. https://www.biodiversitylibrary.org/page/8797190

Matschie P (1900d) Über geographische Abarten des afrikanischen Elefanten. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1900: 189–197. https://www.biodiversitylibrary.org/page/8797195

Matschie P (1904) Bemerkungen über die Gattung *Gorilla*. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1904: 45–53. https://www.biodiversitylibrary.org/page/7673816

Matschie P (1905a) Einige Anscheinend neue Meerkatzen. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1905: 262–276. https://www.biodiversitylibrary.org/page/7897367

Matschie P (1905b) Merkwürdige Gorilla-Schädel aus Kamerun. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin, 279–283. https://www.biodiversitylibrary.org/page/7897374

Matschie P (1910) Ein Steppenfuchs aus Kamerun. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin, 370–371. https://www.biodiversitylibrary.org/page/43615821

Matschie P (1914) Neue Affen aus Mittelafrika. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1914: 325–332. https://www.biodiversitylibrary.org/page/43608393

Matschie P (1917) Die Untergattung *Stachycolobus* ROCHEBR. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1917: 152–163. https://www.biodiversitylibrary.org/page/43576253

Matschie P (1919) Neue Ergebnisse der Schimpansenforschung. Zeitschrift für Ethnologie 1919: 62–82. https://digi.evifa.de/viewer/image/1569514108988/125/#topDocAnchor

Ministry of Agriculture and Rural Development (MINADER) (2015) The State of Biodiversity for Food and Agriculture in the Republic of Cameroon. Food and Agricultural Organisation 2015: 1–2.

Neumann O (1905) Über neue Antilopen -Arten. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1905: 91–92. https://www.biodiversitylibrary.org/page/7897168

Peters W (1874) Über eine neue Art der Säugethiergattung *Bassaris* aus Centralamerica und eine neue Eichhornart aus Westafrica. Monatsberichte der Königlichen Preussische Akademie des Wissenschaften zu Berlin 1874: 707–708. https://www.biodiversitylibrary.org/page/36627077

Peters W (1876) Hr. W. Peters las über die von dem verstorbenen Professor Dr. Reinhold Buchholz in Westafrika gesammelten Säugethiere. Monatsberichte der Königlichen Preussische Akademie des Wissenschaften zu Berlin 1876: 475–481. https://www.biodiversitylibrary.org/page/35329852

Pohle H (1919) Die Unterfamilie der Lutrinae. (Eine systematisch-tiergeographische Studie an dem Material der Berliner Museen). Archiv für Naturgeschichte 1919: 145–147. https://www.biodiversitylibrary.org/page/45490215

Pohle H (1943) *Scotonycteris ophiodon* sp. n., eine neue Art epomophoroider Flughunde. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin 1942: 78–87.

Sarmiento EE, Oates JF (2000) The Cross River Gorillas: A Distinct Subspecies, *Gorilla gorilla* Diehli Matschie 1904. American Museum of Natural History, 55 pp. https://doi.org/10.1206/0003-0082(2000)3304%3C0001:TCRGAD%3E2.0.CO;2

Suarez AV, Tsutsui ND (2004) The value of museum collections for research and society. BioScience 54(1): 66–74. https://doi.org/10.1641/0006-3568(2004)054[0066:TVOMCF]2.0.CO;2

Taku Bisong P (in prep.) Cameroon in Berlin 1. Collections. Report on mammal collections of the Museum für Naturkunde Berlin.

Turni H, Hutterer R, Asher R (2007) Type specimens of "insectivoran" mammals at the Museum für Naturkunde, Berlin. Zootaxa 1470: 1–33. https://doi.org/10.11646/zootaxa.1470.1.1

Wirz A (1972) Vom Sklavenhandel zum kolonialen Handel: Wirtschaftsräume und Wirtschaftsformen in Kamerun vor 1914. Atlantis, Zürich, Freiburg, 125–126. https://docs.google.com/file/d/0B-6Bw-KX3F6HXMERBVldpWUtkZjQ/edit?resourcekey=0-WoR-WVE9DZEIqCjEvAKjefQ [September 22, 2023]